

## **New ideas of landscape policy for riverside landscapes in Moscow region**

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## **Новые идеи ландшафтной политики для прибрежных ландшафтов Московского региона**

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Проблемы, связанные с нерегулируемой нестационарной рекреационной деятельностью, свойственны для всех водных объектов Московской области, пригодных для отдыха, и являются региональными. При решении этих проблем сохранение природы и оптимизация окружающей среды являются приоритетным направлением деятельности. Для этого необходимо сформировать единую политику в области нестационарной рекреации, направленную на реализацию эффективных методов охраны природы и поддержания экологического баланса в условиях регламентируемого рекреационного природопользования. Автором предложена методика подобного исследования. В работе представлены основные принципы, стадии и методы проведения экологической регламентации рекреационного природопользования. Сущность последней состоит в таком регулировании отдыха населения, которое при имеющемся сочетании факторов приведет к минимальному экологическому риску.

The idea of landscape management is old enough, but the use of the word in its present context is relatively recent. Over the years the landscape policy has acquired many connotations: to some it has meant the protection of the environment, to others the sustained production of useful materials from the natural resources.

This survey is based on the researching of outstanding landscape architects and geographers, such as K. Eringis, A. Drozdov, V. Nikolaev, A. Avakyan and others.

Many rural landscapes are accepted by a conflict between the needs of agriculture, conservation and recreation. People destroy the landscapes or interfere with the flora and fauna.

In last 10 years unorganized recreation has become the main factor of negative human influence on coastal ecosystems. Today we observe the increasing degradation of such areas, decreasing of their ecological and esthetical value.

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Ecosystems of water area and riversides of Moscow region possess significant recreational resources, which have a perennial history of the use. There several water reservoirs in Moscow region, but we'll consider the Mozhajsk riverside's landscapes.

Different types of unorganized rest, such as picnic (beach, picnic-beach, camps, fishing and the rest by the water motor technology) were developed here. Herewith all of the natural and natural-human complexes of riverside recreational zone adjoining water area are involved in the sphere of recreational influence.

More than 111 thousand people usually relax on this territory of riverside recreational zone from April till October, that presents itself the overweening loads on coastal ecosystems. The peak reposing happens to the warmest period of the year (July, August).

Degradation is observed as the result of the overweening loads on coastal ecosystems uncontrolled and unregulated rest.

Decisions to the problems of recreational environmental management is possible only on base of shaping the new type of the mutual relations in the sphere of recreational tourist activity. They exclude the possibility of destruction and degradation of natural systems. One of the types of such relations is ecological regulation of recreational environmental management. The main principles are:

- limiting of the loadings and influence;
- impossibility of the realization of the rest which accompanies with degradation of the natural surroundings;
- prevention of the negative consequences as the result of the recreational tourist activity;
- establishment of a mode of protection;
- preservation of an opportunity of realization of free-of-charge rest without granting services;
- regulation of attitudes {relations} between land owners - land users on the basis of the Ground Code;
- coordination of actions and a coordination in decision-making on conducting an agriculture;
- the responsibility (reference of all charges on prevention, elimination and indemnification of negative influence on the concrete originator);
- equal in rights participation of the government, self-government institutions, a civil society and business circles in preparation, discussion, acceptance and realization of decisions in the sphere of recreational environmental management.

Being guided by these principles, and also the methodical recommendations developed by us, in pool Mozhajsk of a water basin on modelling site the regulation of recreational environmental management has been determined optimum, from the ecological point of view. The essence of it will consist in such regulation of rest of the population which at an available combination of factors will lead to the minimal ecological risk.

For the organization of researches on a regulation of recreational environmental management we had been allocated 5 basic stages: first-time inspection; a choice key (modelling sites); carrying out of complex researches; an estimation of recreational potential; the integrated target concept of use of territory.

The main criteria for delimitation of recreational site (RS) were change prepotent phytocoenosis, occurrence of other type of recreational environmental management, presence of natural and anthropogenic limiting factors of access to RS. In result by us it has been allocated 61 RS in the basin of a Mozhajsk water reservoir.

At presence of objects stationary recreation were allocated separate RS. In the submitted area it has been fixed 11 RS.

The quantity of key (modelling) sites was defined by a variety of natural territorial complexes (NTC), suitable for recreational use, intensity of recreational use, etc. Among the basic requirements showed to them:

- absence of other sources of anthropogenic pollution of water object within the limits of a zone of rest;
- sufficient intensity of recreational loadings on natural complexes of a reservoir.

Modelling sites should characterize all variety NTC of a coastal zone of the water basin, used for various kinds of rest as even in same natural and climatic zone different coastal complexes of water basins possess various stability to recreational loadings. In key territories it is necessary to carry out comparison of one NTC one type, but with various recreational loadings for revealing recreational stability of the given complex by comparison of a disturbance's degree of the elements NTC at various recreational loadings. In the submitted work as modelling the site, satisfying all set forth above requirements has been chosen.

Complex researches in the basin of a Mozhajsk water reservoir (it is especial on a key site) were carried out in the summer 2002 - 2003<sup>rr</sup> for definition of a modern ecological condition of natural complexes in researched area. Included the analysis of factors of ecological risk during which character and a degree of influence recreation on various components of an environment (influence on a relief, ground, vegetation, fauna, water resources, visual pollution of a landscape) have been revealed.

On the basis of the technique developed by us, the estimation of recreational potential of the site, basing on summation of estimations of comfort of a coastal line and aesthetic appeal RS has been lead.

According to our facts, as a whole for today recreational potential in the basin of a Mozhajsk water reservoir is not exhausted yet, however modern lines of increasing development of the bottom and average parts of a reservoir will lead to full degradation of coastal complexes, and, as consequence, to decrease in its aesthetic and recreational value that can promote progressing increase in recreational loadings in upper water basins.

For reception of the adequate information on a condition of the ecosystems and degrees of influence on them of recreational use in zones of rest, the identical set of characteristics and parameters for separate components of a landscape is whenever possible investigated. Then the received information is analyzed for the ecosystems of various taxonomic levels. The decision of a problem will consist in correct distribution of recreational loadings (by kinds of rest) at which the ecosystems do not lose ability to self-restoration after removal of loadings. The empirical way us had been deduced the formula for calculation of recreational loadings. On the basis of the received data the card of a degree of recreational loadings on coastal zone in the basin of a Mozhajsk water reservoir is made.

The technique of carrying out of an ecological regulation of recreational environmental management developed by us has been approved on modelling site potential in the basin of a Mozhajsk water reservoir.

For preservation of typical coastal complexes and traditional rural landscapes at optimum satisfaction of recreational requirements of inhabitants of Moscow and its suburbs we offer the organization of especially protected natural territory of a category « the Coastal recreational zone » .

Optimum, from the ecological point of view, in a coastal recreational zone it is possible to provide a regulation of environmental management only by differentiation of territory on the functional zones differing by the purpose and accordingly by a mode of use:

- A zone of strict protection;
- A zone of limited recreational and tourist use (camps and picnic rest);
- A zone of mass rest;
- A buffer zone.

In result were made map-schemes of a nature protection infrastructure and a card of functional zoning for all territory of a modelling site. For each of zones were offered planning variants of the actions necessary for maintenance of their functioning.

Modes of environmental management (the allowable and forbidden kinds of activity) as for all territory of coastal recreational zone, and for its each functional site have been developed.

The mode of protection is directed on prevention of infringements of the nature protection legislation in the present and the future, on preservation of typical coastal complexes, meadow, wood, riverside and field ecosystems.

The environmental problem is closely connected to economic and social problems. Degradation of the coastal ecosystems causes appreciable economic damage which burden is born, first of all,

by participants of ground attitude, municipal formations and the Moscow area as a whole. This damage and is compensated by nobody by anything. In process of the further degradation of the natural ecosystems the quantity of the means necessary on regenerative actions, will grow. There are facts of the conflict of interests between representatives of groups having a rest, practicing different kinds of recreation. Rest on coast of water objects is necessary need of the population, determining its health. In process of progressing degradation of natural systems and development of disputed situations, rest becomes all less high-grade, down to full loss of its improving functions.

The problems connected with noncontrollable non-stationary recreational and tourist activity, are peculiar for all water objects of the Moscow area, suitable for rest, and are regional. At the decision of these problems preservation of the nature and optimization of an environment are a priority direction of activity. Steady development of the territories which are included in the basin of a Mozhajsk water reservoir, high quality of a life and health of their population, including realization of the right on a safe environment, and also ecological safety cannot be to the full provided without preservation and maintenance of a corresponding condition of the coastal natural complexes playing a key role in ecological well-being of territory. For this purpose it is necessary to generate a uniform policy in the sphere of non-stationary recreational and tourist activity, directed on realization of effective methods of environmental management and maintenance of ecological balance in conditions of regulated recreational environmental management.